The Color Big Bang: 30 years of GMG evolution.

trueColors
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“We feel a strong commitment to both our customers and our employees.”

GMG’s owner on 30 years at the cutting-edge of color 4
GMG celebrates its 30th year!

Little did Joerg and Robert Weihing know when they joined their father’s business in 1984, that thirty years on they’d have a suite of almost 15 world-class, often industry-defining, color management products in the GMG stable.

The company’s customers now span a wide range of industries and application areas including advertising agencies, prepress houses, offset, flexo, packaging, digital, and large-format printers as well as international gravure printers.

Since their early dissatisfaction with the color results of the IRIS units they sold, the brothers have had a passion for consistent, accurate color reproduction. They are though quick to point out that the companies growth has been, in no small part, down to the excellence and commitment of the staff they have employed over the years – some in their 20th year with the company. Since its initial success in the gravure sector, GMG continues to adapt to the new printing and prepress methods and prides itself on staying ‘ahead of the technological curve’ in all areas of its business. It does by listening closely to its customers needs and concerns, developing close manufacturer ties, and encouraging standardization across the industry.

Robert and Joerg wish to thank all their customers over the years for their support. Their sincere appreciation also goes out to all the GMG staff who have helped, and are still helping, to make the company a worldwide sucess.

One 30 year-old family business benefits from another 30 year-old family business.

Packaging production company Faret s.a. – founded in 1986 and still family owned – has installed GMG OpenColor to accurately help represent spot colors from process inks, reduce the number of spot colors required on press, cut down on press runs, and save prepress time. GMG used Faret as a beta site for GMG OpenColor – the first installation in Latin America and the software now complements the company’s GMG ColorProof, GMG ColorServer and GMG InkOptimizer systems.

The full case study of Faret s.a. and GMG will be in the next issue of trueColors.


www.gmgcolor.com
THIRTY YEARS OF CONVERTING, STANDARDIZING, REPRODUCING, MAXIMIZING, CONTROLLING, SHARING AND EVOLVING COLOR.

Robert Weihing, co-owner of GMG (left), and Ian Scott, GMG Worldwide MD (right), talk about the history of the company in its 30th year, how it's shaped the color management landscape, and its plans for the next 30.

Who was the driving force behind the formation of GMG in 1984?

It was my father. He was a salesman for repro equipment. In his last job, he was MD at a graphic art dealer. The company sold sign cutting plotters for the sign making industry. Sign making then used self adhesive foils. For every color you needed another foil, another layer. This was the reason to think about a machine able to print multi-color (remember, there was no EPSON, HP, or Canon product at that time that could do this). We decided to use an IRIS 3037 – these machines had never been used in signmaking before. On printing an image from a slide one day, we saw that many of the browns reproduced as green. It was then that we realised that we had to start learning the process of color management.

What was reprographics and print like in 1984?

Most jobs were still handled manually; copying film, painting masks with a brush, or using potassium ferricyanide to etch the films. Accuracy of color was more about the relation between the colors of the image. Proofing was a kind of proprietary world... Cromalin, Matchprint. Each of these ‘systems’ was more or less stable and the color result was close to something like an offset press and each of those systems built a kind of pseudo-reference. The other proof was the wet – proof from a little press.

contd/
Who developed the first algorithms that remain at the heart of GMG software?

My brother and co-owner, Joerg, with his mathematics background, started to understand the process of color management. He is very autodidactic (self-taught) – he had a reminder on his screen; a note saying ‘cyan = blue, magenta = red’! Juergen Wurster, our Head of R&D, was also instrumental in the early process. It took 4 years of development to get to the first version. We later worked with a lot of other very talented people.

Where were GMG products first used?

In the 90s the need for color accuracy in the German gravure printing industry and of several segments of the packaging industry – especially the simulation of spot colors – meant our proofing and color management software solutions became popular quite quickly and grew simultaneously.

What has been GMG’s most significant contribution to color management?

There’s been many over the decades – each redefining the possibilities and extending the boundaries of color in the graphic arts. ColorProof became the most accurate proofing software the day it was launched – and still wins awards in proofing ‘shootouts’.

Our award-winning ColorServer software has been ‘the standard for working to standards’ for over a decade. Our latest big step forward and ‘gamechanger’ is the OpenColor technology.

And in the last 15 years or so?

Since 2000 graphic arts technologies have changed greatly. From expensive and slow continuous-ink proofing hardware to fast and much cheaper drop-on-demand technologies. Measurement devices have become common-place and all the tools are more precise and userfriendly. Customers needs have developed and GMG has expanded its portfolio to serve the different requirements for color-managed results in the different sectors. Today our portfolio targets the creative designers or photographers through the agencies and prepress houses to the printers that are either working on a traditional press or on a digital output device.

What is the company working on now?

During the last years we have developed new strategies to manage more complex tasks at the highest quality level you can get.

With the technology in OpenColor and the cloud-based platform CoZone, we are ready to take color management to the next level.

What would you put GMG’s success down to?

Robert and Joerg established very early on a culture of listening to the customer’s needs. I think it’s why all of our products become successful – because they have been designed and developed in conjunction with our users. This has extended into our support operations and general customer services. We are a company that listens to the good feedback and the bad feedback and works with clients and sector hardware partners to create high-end, high-quality solutions. Our ultimate goal for each of our products is not just to compete in the marketplace, but to redefine it. This is evident in the amount of award-winning products we produce – for instance, OpenColor recently received the prestigious Flexographic Technical Association Technical Innovation Award.

What keeps you interested after 30 years?

At the end of the day, Joerg and I are running a family business with a very long term approach. We feel a strong commitment towards our customers and our employees and are happy to invest in the company.
“WE HAVE JUST STARTED”
SAYS GMG’S SENIOR TECHNICAL ADVISOR
JUERGEN SEITZ ON 30 YEARS OF GMG

“My career began in the Offset and Gravure Prepress sectors in the 80s with all the traditional tools and materials.”


“‘In the 80s a colormanager had to see an image and its quality by just looking at 4 black/white films that were separated for CMYK. As a kind of artist he would take his brush and paint masks on the single films, using his secret recipe for the etching solution for his retouching’”

“In the late 80s early 90s, the colormanager was a specialist on very proprietary software and hardware solutions for dry-etching and digital retouching... the machines were dinosaurs and the technology evolved at tremendous cost. Scitex, Hell, Crosfield, Barco, Dainippon-Screen ... these were some of the big names at that time.”

“So a timeline would see the change from an artist through to a very skilled specialist to a skilled SOP (Standard Operation Procedures) operator”

“It was an interesting and breathless period of technological evolution with scanners and retouching systems until the Macs and Adobe took over layout and retouching.”
“STANDARDIZATION IS THE HUGE DIFFERENCE BETWEEN TODAY AND THE EIGHTIES”

“A lot of uncertainties from the 80s have been solved. Today we are much better at understanding the tolerances of all the process variables and their impact on our results.”

“Important milestones have included the standardization of the output-channels (with all the ISO-standards for paper, printing, measuring, viewing color) and the harmonization of color communication terminology (through reliable Lab, Lch and not density or CMYK)”

“In the 80s, CM tools perhaps helped to get 10% better or more efficient. I would say that maybe 80% of our 4-color prepress work can today be automated with a well designed CM system: such as GMG ColorMaster”

“Today we do much better in understanding the tolerances of all the process variables and their impact on our results”

“We were the first to use random testcharts, push DL-technology to the next level with iterative measurements and calibrations ... and with OpenColor, enable top level CM just based on the minimum of color information”

“In 10 Years time most CM will be invisibly automated. CM will move closer to initial color decisions, meaning the creative part of an image creation will have CM tools while in production it will be more and more invisible.”

“Through all the years, the most important skill was to use all the given tools to interpret a customers perception as effectively as possible ... and to explain it to the customer in a way that would find his personal wishlist fulfilled”

“Still the most important moment in our industry: when the customer “buys” an image, or the interpretation of it”

“Color is still managed to please our perception and this is the area where CM will basically remain: as a design tool, earlier in production, in the creative process ...”
Products that redefine their sector, set new standards, and keep pushing the boundaries do not happen overnight.

As this timeline shows, sometimes it can take 30 years...

How the timeline works:

The year: **XX**

- What was happening at GMG that year
- What was happening in the prepress industry that year
- What was happening in the world that year

continue..
GMG starts trading: sells cutting plotter system for signmaking market

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The Apple Macintosh is launched, Adobe releases PostScript, Linotype introduces the Linotronic 300 imagesetter

The Apple Macintosh is launched, Adobe releases PostScript, Linotype introduces the Linotronic 300 imagesetter

There are 50 servers on the internet, Monica Seles stabbed by spectator, Bill Clinton is US president

Unhappy with color results, GMG begins color management development for IRIS inkjet

Microsoft introduces Windows 3.0, the first ‘usable’ version of its OS, drupa sets new record of 430,000 visitors

Mandela is freed from prison, Iraq invades Kuwait, first reality TV show airs

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Virgin Atlantic inaugural flight – Gatwick to Newark

GMG expands into inkjet. Buying the first Inkjet printer: A0 format IRIS 3047

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International Color Consortium (ICC) founded, digital presses make their debut

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Supports new IRIS Realist (automatic paper load)

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Restructure of the company: Joerg and Robert Weihing become owners

Breakthrough at DRUPA 95 as GMG ColorProof supports new IRIS Realist (automatic paper load)

Dye-sub printers are popular for page proofing

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Creo’s TrendSetter first thermal CTP system, dye-sub printers are popular for page proofing

OJ Simpson found innocent, Nick Leeson loses $1.4b at Barings Bank, first search engine – Yahoo! is founded

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Scitex releases Brisque workflow, Adobe and Microsoft launch OpenType

Deep Blue defeats Garry Kasparov, Germany win Euro96, Mad Cow Disease hits Britain

Restructure of the company: Joerg and Robert Weihing become owners

Restructure of the company: Joerg and Robert Weihing become owners
GMG UK Est. ColorProof 5.0 and SmartProfiler 1.0

Michael Jackson dies, Maersk Alabama is hijacked off Somalia and becomes a movie with Tom Hanks

Printing costs tumble: in 1995 1,000 4 color business cards cost $125. In 2009 they cost approx. $9.95

Kodak files for Chapter 11. After 244 years the Encyclopædia Britannica stops its print edition

ProductionSuite 1.0 OpenColor1.0 ProofControl 2.0 InkOptimizer G-Turbo CoZone 1.0 launched


www.gmgcolor.com
Wherever a color goes it stays that color
GMG ColorServer 4.9, an updated version of the popular automated color conversion software, has significant new features that expand the award-winning software’s capabilities even further.

Most notable is the support of the PDF/VT-1 variable-data file format. PDF/VT-1 is a highly-optimized file specifically designed for the efficient digital printing of a wide range of variable data and personalized content such as transactional/transpromo (credit card bills, bank statements, etc.), personalized direct mailshots, catalogues, photobooks, coupons, tickets, etc.

Part of the challenge of variable-data printing is the often extremely fast file processing requirements to ensure just-in-time delivery to the latest generation of high-speed digital printing presses. CONTD/...
GMG has addressed this issue with ColorServer 4.9 from two directions. Firstly, the current 32-bit version of the application has been greatly optimized to deliver extremely fast file processing times – up to 3,000 variable-data PDF pages per minute can be individually color-managed using ColorServer 4.9 (depending on hardware configuration, job specification, etc.). Secondly, for even higher performance GMG is releasing a 64-bit native version of ColorServer 4.9, which in effect offers almost unlimited file processing capabilities to feed even the most demanding variable-data applications.

**CMYK to RGB conversion**

While color retouching is usually applied to a file while still in its RGB values, often print service providers are only supplied with CMYK files (maybe even a multitude of CMYK color spaces – ISO, SWOP, GraCOL, etc.) making the task of color retouching that much more challenging. ColorServer 4.9 offers an extremely accurate CMYK to RGB lossless conversion process that enlarges the color space back to the file’s original Adobe RGB values. This allows for color space normalization within an RGB-based image database, only performing the device/process specific CMYK conversion at the final output stage.

**Improved paper adaption tool**

The Paper Adaption Tool in ColorServer allows print service providers to recalculate a file’s color data against a particular support material, even if the particular proof simulates a different final stock. For example, the Paper Adaption tool could adjust your print data to match an “ISOcoatedV2” proof, even if your production material is different. With ColorServer 4.9, the Paper Adaption Tool has been improved by offering a better quality of profile simulation, as well as the ability to offer custom gamuts for particular substrates.
or much of the last 15 years or so, variable data in digital printing (VDP) has widely been regarded as “the next big thing”. The technology has now reached the tipping point and its vast, untapped potential can finally be realized. Today, VDP is routinely used for all manner of personalized information — from credit card bills and bank statements to direct mailshots and personalized catalogues, from college enrolment packs to photobooks, from cheques to tickets. These jobs are created and managed by a wide variety of software, from specialist composition tools to general-purpose design applications configured for VDP, and pass through workflows involving — or even completely within — the digital front end (DFE) for a digital production press. A similarly broad variety of people use these tools, from graphic designers and marketing campaign managers, through experts in data management, to — last but definitely not least — digital press and finishing equipment operators.

The result is the evolution of a huge number of complex, sophisticated workflows. Many of these are based on PDF and its standardized subset PDF/X, which have become the dominant delivery formats for conventional print and print-on-demand (PoD). According to InfoTrends, 85% of Print Service Providers are using PDF for their VDP work.* Recently PDF’s pre-eminence has been reinforced by the PDF/VT format, designed specifically to support robust delivery and production of modern variable data print jobs. PDF/VT enables graphic designers to apply many of the features they use in commercial print and publication work to complementary direct mail and transpromo campaigns. The format also includes metadata that can be linked to a job ticket such as JDF, allowing for more automated processing and finishing. PDF workflows work very well most of the time. However, as VDP jobs themselves become richer and more complex, they place additional demands on the processing power of the DFE: printing a VDP job at 120 pages a minute means RIPping 120 pages a minute. Each minor inefficiency in a VDP job often only adds between a few milliseconds and a second or two to the processing of each page, but multiply those times by the number of pages in the job and the problem becomes clear. A delay of half a second on every page of a 10,000-page job running at 120ppm adds 30 minutes to the whole job; for a really big job of a million pages an extra tenth of a second per page at 5,200ppm adds 24 hours to the total processing time. As a result, constructing PDF files properly — “optimizing” them — has become critical to production efficiency. Poorly constructed PDF files can impact print service providers in two ways. Firstly, the additional processing they require slows down the digital press, reducing the return on investment (ROI) and disrupting production schedules that are typically tight, particularly for variable data direct mail and transactional print. Secondly, they can make the DFE more expensive because to expand the processing capability the press vendor builds in more hardware than would be necessary if all jobs were well-constructed.

Get up to speed with PDF/VT
Steps to optimize PDF/VT

Fortunately there are a number of simple measures designers and users of VDP can take to streamline the PDF workflow, as a new independent guide to optimizing PDF files explains. Do PDF/VT Right™: How to Make Problem-Free PDF Files for Variable Data Printing is a concise, readable, independent guide that provides objective information and advice to anyone with a stake in VDP print: graphic designers, print buyers, production managers, press operators, owners of PSPs, and digital press DFE developers.

The guide, which is available free of charge, is edited by Martin Bailey, chief technology officer for Global Graphics and the primary UK expert on the ISO committees that maintain and develop PDF and PDF/VT. Do PDF/VT Right™ is sponsored by a number of other leading vendors in the VDP sector — DirectSmile, Global Inkjet Systems, HP Indigo, HP Inkjet High-Speed Production Solutions and Screen. The content is rigorously vendor-independent which is why the guide is also endorsed by the PODi and Xplor industry associations.

“Don’t force your digital press front end to swallow an elephant if it only needs a mouse…”

Martin Bailey says the main aim of the guide is “to promote one simple maxim: don’t force your digital press front end to swallow an elephant if it only needs a mouse! In other words, don’t ask the workflow to do more than it needs to if there’s no benefit for the designer, marketing department or recipient of the printed piece. There’s no intention of reducing the freedom of the designer to achieve the visual effects they want to — just to ensure their design can be encoded into a PDF file as efficiently as possible.”

Bailey says that transparency is a key area where improvements can be made. “The very rich and flexible support for live transparency in PDF is an incredibly useful aspect of the format, and is one of the key reasons for selecting PDF over other page description languages for production print. On the other hand, compositing transparent regions in a PDF file is much more processor-intensive than handling opaque areas of a page. For example, we see PDF files where images have drop shadows attached to them — even though they’re on a solid black background and the shadow can’t be seen. Simply gaining a better understanding of what’s happening inside the PDF can have major benefits.

To download a free copy of ‘Do PDF/VT Right™ How to make problem-free PDF files for variable data printing’ click here
Mamas & Papas opt for a proper grown-up color solution.

The much admired company has invested in GMG ColorProof and GMG ColorServer software solutions to provide higher quality, consistent print and proofing across the board.

Who?

Launched in 1981 by husband and wife Luisa and David Scacchetti, Mamas & Papas is one of the biggest names in the UK for nursery, baby and childcare products. From its headquarters in Yorkshire, the company employs 1,473 people around the world, sold in over 3,000 locations in 49 countries. The brand is favoured by celebrities such as Beyonce, Gwen Stefani and Alicia Keys.

Set up

In-house based design. Mamas & Papas’ creative, artwork and repro teams combine to operate on the lines of a full service agency. From idea generation through to print-ready artwork, they manage and co-ordinate multiple projects. The design briefs range from national advertising and in-store POS to product packaging and catalogues.

How?

Mamas & Papas Studio Print & Production Manager Samantha Gayford: “We had been using EFI Color Verifier for some time but found it limiting.”
Printing

Brand identity and the control of brand color is of utmost importance to the company. Print is placed throughout the UK across an approved roster of print suppliers from digital, to litho and web offset, so the need for controllable print is paramount. Samantha Gayford explains: “We take color matching very seriously and the ability to establish a color standard for the brand that can be communicated consistently to our print partners is something we strive for.

Why GMG?

“The main reason we came to GMG was a need for standardization and achieving color consistency across our print processes,” says Samantha. “We needed a way to reference the output characteristics of all our printers to allow us to deliver consistent results regardless of which machine or media the job was printed on.

The solution

GMG proposed a solution based on GMG ColorProof and GMG ColorServer software applications driving a 24-inch Epson Stylus Pro 7900 with inline spectro proofer for automated color management and calibration. Designed to offer Mamas & Papas a device-independent output that would be easy to manage on a day-to-day basis, this also allows the company to manage output against their target print color spaces, for example FOGRA 39L & 47L for uncoated print jobs.

Teething problems?

After a smooth installation and training period, Mamas & Papas couldn’t be happier with the results. “Since the installation in September 2013 the results have been impressive,” says Samantha. “Using GMG software gives us absolute confidence that colors will be the same across the board. It has enabled us to operate with greater efficiency, reducing the time taken to produce each job, with complete peace of mind that colors will match.”

The future

With the majority of its packaging print supplied by printers in the Far East, a key area Mamas & Papas wishes to develop with its export suppliers is the setting up of targeted profiles for screen print and flexo by supplier, to maintain consistent print output. Linking color management to their internal POS print facility is also an area Mamas & Papas are keen to explore, to bring this in line with GMG tolerances.
The ‘I no longer care if you send me cmyk files for retouching’ profile.

Only available with GMG ColorServer 4.9

- Extremely accurate CMYK to RGB lossless conversion process that enlarges the color space back to the file’s original for retouching.
- Support of the PDF/VT-1 variable-data file format. 3,000 variable-data PDF pages per minute can be individually color-managed.
- Paper Adaption Tool has been improved by offering a better quality of profile simulation, as well as the ability to offer custom gamuts for particular substrates.
Latest Versions
Get the most out of your GMG software
Glaucos: the color of the powdery blue effect you get on some red grapes.

Grapes can help eyesight.
In a recent survey amongst color management experts, 54% said good eyesight was important in their job. The other 46% – all GMG customers – said that it didn’t matter if they were as blind as a mole, GMG software made their need for vision redundant. Be this as it may, regular grape consumption may play a role in eye health by protecting the retina from deterioration, a new study has claimed. US researchers found that a grape-enriched diet resulted in a protective effect on retina structure and function.

The rarest grape
The rarest grape variety in the world, there are only 2 hectares of this variety grown today, a genetic cross between Merlot and Cabernet Franc. It is truly unique as you can only find this grape in one estate in Tuscany.

Driven by hunger, a fox tried to reach some grapes hanging high on the vine but was unable to, although he leaped with all his strength. As he went away, the fox remarked ‘Oh, you aren’t even ripe yet! I don’t need any sour grapes.’ People who speak disparagingly of things that they cannot attain would do well to apply this story to themselves.

From Aesop’s fables.

The origin of the phrase ‘sour grapes’.

The Stones’ Brown Sugar or Beatles Yellow Submarine?
Always The Beatles

the backpage interview
Camila Packeiser, Inside Sales Manager, GMG GmbH & Co

What is your favorite color? Orange
Why? It reminds me of the country where I grew up, Colombia
What color best describes your personality? Fire-red
What book are you reading right now? I am re-reading Lean in, by Sheryl Sandberg and Seven habits of highly effective people, by Stephen R. Covey
Tell us something about you that will shock and amaze the readers of trueColors? As a young girl I used to practice artistic gymnastics and today, I still can do back flips
When you’re not working what do you do? Sports, reading, watch films
Who would you most like to have over for dinner? Pierce Brosnan
Who would play you in a movie about yourself? Eva Longoria
Cat or dog? Cat
If you couldn’t work for GMG in another country, which would it be and why? China, because of its historical past and the market potential. I also admire the perseverance of Chinese people.
Favourite GMG product? InkOptimizer with G-Turbo: high savings and high quality
What was the last movie that made you cry? I had tears of laughter watching The best exotic Marigold Hotel
If you weren’t at GMG what would you want to be? Choreographer of a large dance performance company
Okay, now for the tedious, but relevant, questions containing a color: What do you like to do once in a blue moon? Skydiving
What or who makes you green with envy? People who can travel a lot
Red or white wine? Red wine
What’s the last white lie you told? I just need five minutes of your time
The Stones’ Brown Sugar or Beatles Yellow Submarine?
Always The Beatles